National Institute of Environmental Health Sciences

Farmer health and adaptive capacity in the face of climate change and variability. Part 1: Health as a contributor to adaptive capacity and as an outcome from pressures coping with climate related adversities

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Abstract:

This paper examines the role farmers' health plays as an element of adaptive capacity. The study examines which of twenty aspects of adaptation may be related to overall health outcomes, controlling for demographic and on-farm-factors in health problems. The analysis is based on 3,993 farmers' responses to a national survey of climate risk and adaptation. Hierarchical linear regression modelling was used examine the extent to which, in a multivariate analysis, the use of adaptive practices was predictively associated with self-assessed health, taking into account the farmer's rating of whether their health was a barrier to undertaking farm work. We present two models, one excluding pre-existing health (model 1) and one including pre-existing health (model 2). The first model accounted for 21% of the variance. In this model better health was most strongly predicted by an absence of on-farm risk, greater financial viability, greater debt pressures, younger age and a desire to continue farming. Social capital (trust and reciprocity) was moderately associated with health as was the intention to adopt more sustainable practices. The second model (including the farmers' health as a barrier to undertaking farm work) accounted for 43% of the variance. Better health outcomes were most strongly explained, in order of magnitude, by the absence of pre-existing health problems, greater access to social support, greater financial viability, greater debt pressures, a desire to continue farming and the condition of on-farm resources. Model 2 was a more parsimonious model (only nine predictors, compared with 15 in model 1), and explained twice as much variance in health outcomes. These results suggest that (i) pre-existing health problems are a very important factor to consider when designing adaptation programs and policies and (ii) these problems may mediate or modify the relationship between adaptation and health.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3210596

Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☑

audience to whom the resource is directed

Health Professional, Policymaker, Researcher

Exposure :

weather or climate related pathway by which climate change affects health

Unspecified Exposure

Geographic Feature:

resource focuses on specific type of geography

Rural

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact:

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Workers

Other Vulnerable Population: farmers

Resource Type:

format or standard characteristic of resource

Research Article

Resilience:

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content